

### **REMARKS**

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for newly added claims 26 and 27 can be found in the specification at page 4, lines 23-27. Support for newly added claims 28 and 29 can be found in the specification at page 4, lines 11-15. Support for newly added claims 30 and 31 can be found in the specification at page 3, lines 34 and 35.

Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruppel et al., EP 0 534 195 (hereafter "Ruppel") in view of Hamilton, US 3,384,667 (hereafter "Hamilton"). Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruppel in view of Hamilton, as applied to claim 4, and further in view of Lahne et al., US 4,339,413 ("Lahne"). The applicant respectfully traverses these rejections.

The Examiner stated in the middle of page 3 of the Office Action that Ruppel is silent about a fixed bed of catalyst comprising a shape-selective catalyst. The Examiner has relied upon Hamilton for this feature.

The Examiner has stated at the bottom of page 3 to the top of page 4 of the office action that the feature of claim 4, "... cooling is carried out by means of boiling water such that the difference between outlet temperature and inlet temperature of the reactor is less than 35°C," does not impart patentable weight to the claim, since the coolant is not considered an element of the apparatus, and the temperature difference is considered a process limitation.

From applicant's point of view, the coolant is a feature which belongs to the reactor and which does not belong to the process which is conducted in this reactor. See in particular claims 28 and 29. As previously mentioned in the amendment filed November 2007, boiling water is used as the coolant in order to obtain a temperature difference between inlet and outlet temperature of less than 35°C. This low difference between inlet and outlet temperatures results in an elongated lifetime of the catalyst particles, because so-called hot-spots are avoided. The use of boiling water as the coolant therefore helps increasing the lifetime of the catalyst which is present in a fixed-bed and makes it possible that the reactor is designed to obtain the desired product dimethylamine with higher yield and selectivity. Therefore, the coolant is a feature which belongs to the reactor, and which does not belong to the process of the preparation of dimethylamine from methanol and ammonia. This process can also be conducted in a reactor which is cooled by for example by hydrocarbons having high boiling points or other coolants, but only boiling water makes it possible to have a reactor which has a long lifetime, compared to

the reactors of the prior art.

In addition, the temperature difference between inlet and outlet temperature of the reactor is, from the applicant's point of view, not a process limitation, but a reactor limitation, because as mentioned above, this feature makes it possible to create a reactor which has an improved lifetime and which gives rise to an improved surrounding for conducting the reaction between methanol and ammonia.

In addition, on page 4 of the description, in lines 23 to 27 it is disclosed that "the geometry of the arrangement of the cooling tubes and the reactor can be chosen freely, as long as efficient heat removal is achieved. The geometry is preferably chosen so that the temperature distribution in the fixed catalyst bed is very uniform. The design and operation of the reactor are preferably such that the difference between outlet temperature and inlet temperature of the reactor is less than 35°C." See claims 26 and 27. This disclosure in the description of the present application clearly shows that the reactor has to be designed in a way that the difference between outlet temperature and inlet temperature is less than 35°C. This shows clearly that this small difference between the cited temperatures is a reactor feature, and not a process feature.

The process which is conducted in the reactor according to claim 4 of the present application, the reaction of ammonia and low alcohols, can also be conducted in a reactor which has a higher difference between inlet and outlet temperature. The product which is obtained from such a reactor would be the same as the product which is obtained from the reactor according to presently pending claim 4, but the difference would be that the reactor has a decreased lifetime, if the difference between inlet and outlet temperature is higher than 35°C. Therefore, from our point of view, the design of the reactor causes that the temperature difference is lower than 35°C giving rise to the advantages mentioned above and discussed in the applicant's previous responses.

In respect to claims 23 and 25, the applicant believes that this combination of three different documents is the result of a hindsight view of the present invention by the Examiner.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13156-00011-US from which the undersigned is authorized to draw.

Dated: May 12, 2008

Respectfully submitted,

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